



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: :  
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David R. MILLER et al. : Confirmation No.: 4583  
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Serial No. 10/695,441 : Art Unit: 3736  
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Filed: October 29, 2003 : Examiner: Robert Nasser  
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For: BLADDER-BASED CUFF FOR : Atty Docket: P67936US0  
MEASURING PHYSIOLOGICAL :  
PARAMETERS AND METHOD OF :  
MEASURING PHYSIOLOGICAL :  
PARAMETERS USING SAME :

**APPENDIX**

**U.S. PATENT CLAIMS RECITING CONFORMITY TO A HUMAN BODY PART**

U.S. Patent No. 7,073,504:

Claim 20: A method of human contraception comprising a) providing a contraceptive device comprising a tubular body having at least one open end and a member which is configured for tissue growth which is disposed at least partially within the tubular body; b) inserting within a lumen of a patient's reproductive system at least a portion of the contraceptive device including at least part of the tubular body and at least part of the tissue growth member, and c) within a region of the patient's reproductive lumen, *radially expanding at least a tubular portion of the tubular body* about a longitudinal axis from a first configuration *to a second configuration having outer transverse dimensions* which are larger than outer transverse dimensions in the first configuration and *which substantially conform to the inner transverse dimensions of the patient's reproductive lumen* in the region where the tubular portion is expanded.

U.S. Patent No. 7,069,597:

Claim 1: A heat activated form fitting hair cap for substantially sealing an area of a body having hair from the environment, comprising: a heat activated shrinkable body having at least one layer of material having a thickness of between approximately 0.25 mil and approximately 8 mil, a distal edge, an inner surface, and an outer surface; *the heat activated shrinkable body formed to define an open interior volume bounded by the distal edge and generally sized to receive a portion of a human head and to shrink to conform to the shape of the head* when activated by exposure to a heat source thereby creating a substantially liquid-tight seal between the distal edge and the body substantially sealing the portion of the body within the interior volume from the environment; the heat source producing a first predetermined activation temperature between approximately 100 degrees Fahrenheit and 140 degrees Fahrenheit on the outer surface of the heat activated shrinkable body; at least one cap retention means located substantially near the distal edge and thereby ensuring the distal edge substantially conforms to the head prior to activation; wherein the material of the heat activated shrinkable body is substantially moisture resistant and substantially gas impermeable; and the material of the heat activated shrinkable body further having a shrinkage rate between approximately 20 percent and approximately 85 percent.

Claim 3: A heat activated form fitting hair cap for substantially sealing an area of a body having hair from the environment, comprising: *a heat activated shrinkable body* having at least one layer of material having a thickness of between approximately 0.25 mil and approximately 8 mil, a distal edge, an inner surface, and an outer surface; the heat activated shrinkable body wherein the material of the heat activated shrinkable body is chosen from the group consisting essentially of films consisting of PVC, polyolefin, polyethylene, polyester, nylon, and saran; formed to define an open interior volume bounded by the distal edge and *generally sized to receive a portion of a human head and to shrink to conform to the shape of the head* when activated by exposure to a heat source thereby creating a substantially liquid-tight seal between the distal edge and the body substantially sealing the portion of the body within the interior volume from, the environment; the heat source producing a first predetermined activation temperature between approximately 100 degrees Fahrenheit and 140 degrees Fahrenheit on the outer surface of the heat activated shrinkable body; at least one cap retention means located substantially near the distal edge and thereby ensuring the distal edge substantially conforms to the head prior to activation; wherein the material of the heat activated shrinkable body is substantially moisture resistant and substantially gas impermeable; and the material of the heat activated shrinkable body further having a shrinkage rate between approximately 20 percent and approximately 85 percent.

U.S. Patent No. 7,069,073:

Claim 1. A method of treatment by electrokinetic self-administration of a medicament into a treatment site for an individual, comprising: *providing a device shaped in part to conform to at least a portion of an individual's finger* and having a self-contained power source, first and second electrodes, and a substrate in electrical contact with said first electrode and having an exposed contact surface; providing at least one of an electrokinetically transportable medicament or a medicament with an electrically conductive carrier therefor; releasably retaining the device on the individual's finger, with the second electrode in electrical contact with the individual's finger; providing said at least one medicament in contact with said substrate or the treatment site; while the device remains retained on the individual's finger, placing the contact surface of said substrate into contact with the individual's treatment site and causing electrical current to flow through said first electrode, the electrically transportable medicament or the conductive carrier, the treatment site, the individual's body, said second electrode and said power source to electrokinetically drive the medicament into the treatment site.

U.S. Patent No. 7,048,707:

Claim 1: *In an orthotic brace having a hip engaging unit formed to conform to the contour of a human hip*, the improvement of an adjustable support plate assembly for positioning an appendant orthotic member at an operative position relative to an appendage of the user, comprising: a support plate having a securement portion adjacent an anchor location on the hip engaging unit of the orthotic brace and a distal portion to enable linking with the appendant orthotic member which is attachable to the user appendage, the securement portion having a curved configuration and a fastening structure that enables an adjustable movement relative to the anchor location to permit sliding movements of the distal portion towards and away from the user to custom fit a fixed location of the distal portion relative to the user; and a first fastener member for securing the curved configuration to the anchor location on the hip engaging unit to maintain a fixed operative desired position for the distal portion relative to and offset from the user.

Claim 11: *In an orthotic brace having a plastic hip engaging unit toned to conform to the contours of a human hip with a curved anchor location on a side of a user, the improvement of an adjustable support plate assembly for positioning an appendant orthotic member at a fixed operative position that can be set for a user relative to an appendage of the user, comprising: an elongated support plate having a curved securement portion at one end complementary to a curved configuration of the anchor location on the orthotic brace and a distal portion with means for connection to a hinge unit to permit controlled movement of the appendage, the curved securement portion having a fastening structure that enables an initial adjustable movement relative to the curved anchor location to permit sliding movements of the distal end towards and away from the user to determine a fixed location of the distal portion relative to the side of the user; and a fastener member for fastening the curved securement portion at the fixed location on the curved anchor location by engagement with the curved securement portion to provide an operative fixed position for the distal portion offset relative to the side of the user.*

U.S. Patent No. 7,043,762:

Claim 1: An athletic finger, palm and wrist protective pad, comprising: digit protective means for protecting the fingers of a user from jamming, said digit protective means sized and positioned such that, when installed on a hand, all four fingers of the hand can curl around and grasp the digit protective means, palm and wrist protective means for protecting substantially the entire palmar surface of the palm and wrist of a user from abrasion and hyper-extension, digit engagement means for attaching said finger, palm and wrist protective pad to the fingers of a user's hand, wrist engagement means for attaching said finger, palm and wrist protective pad to the wrist of a user, and first securing means for securing said wrist engagement means to said palm and wrist protective means, and second securing means for securing said wrist engagement means in a closed state, said palm and wrist protective means comprising a pad having a first side for facing away from the palm of a wearer and a second side for facing toward the palm of a wearer, a digit end and a wrist end, *said pad formed to substantially conform to the shape of a human palm and wrist*, and said digit protective means comprises a dowel, said dowel being enclosed in a sleeve formed in said digit end of said leather pad, said sleeve being formed by said pad being rolled such that said first side is exterior said roll and said digit end is attached to said pad along a line proximate said digit end of said pad.

U.S. Patent No. 7,031,763:

Claim 1: A MRI quadrature coil for imaging a human shoulder, said shoulder having a superior portion, said quadrature coil comprising: *a first coil arcuately shaped to conform to and extend over said superior portion of said shoulder* from a chest portion to a shoulder blade portion, said first coil having a magnetic axis; and a second coil adapted to encircle said shoulder, said second coil having a magnetic axis generally orthogonal to said first coil magnetic axis.

Claim 15: A method for imaging, said method comprising: providing a first coil; providing a second coil separate from the first coil; *conforming the first coil to extend over a superior portion of a shoulder of a body* and partially down a front and a back of the shoulder across an axis from a neck end of a clavicle bone to a head of a humerus bone; and configuring the second coil to encircle the shoulder.

U.S. Patent No. 6,990,689:

Claim 7: The glove of claim 2, wherein *the weight is formed out of one or more malleable substances that conform to a goalie's hand.*

U.S. Patent No. 6,983,662:

Claim 1: A system of measuring the pulse wave velocity of a human or animal bodily action or fluid along or through a bodily flow conduit comprising *two or more sensor means capable of substantially conforming to a body* and detecting electrical signals, the sensor means located at least 2 centimeters apart on the body along or around the path of the conduit, a support means to apply a pressure below the diastolic pressure in the conduit wherein the sensor means are arranged in or on the support means, a signal processing means adapted to calculate the velocity between the sensor means, and means to transfer signals from the sensor means to the signal processing means.

Claim 8: A system as claimed in claim 1 wherein *the sensor means wholly or substantially conform to the shape of the body* on which they are located.

U.S. Patent No. 6,939,316:

Claim 1: A cranial orthosis for preventing acquired plagiocephaly in infants having a soft developing head area to be protected, comprising: *a molded appliance having an interior surface that is conformed in shape to the surface curvature of a human infant cranium* and operable to accommodate infant head growth; and two or more layers of soft, flexible material releasably disposed in overlapping nested relation and lining the conformed interior surface of the appliance thereby defining a protective pocket for receiving an infant's head, the protective pocket being sized to provide a close, non-compressive fit about the developing head area to be protected such that when an infant's head is received in the protective pocket and the

infant is resting on a sleep surface in a supine position, the infant's head weight forces are spread substantially uniformly across the conformed interior surface facing the developing head area, and whereby the lining layers can be removed one at a time to accommodate head growth.